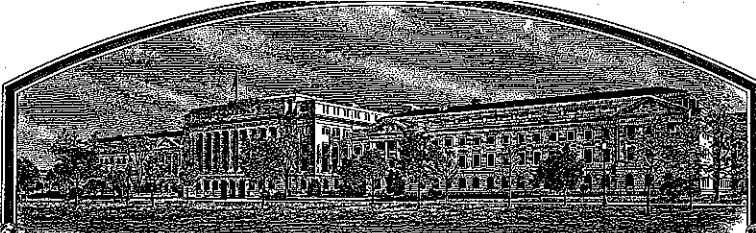


No.

200100273



THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Nunhems B V

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEXUALLY REPRODUCED, OR TUBER PROPAGATED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF TWENTY YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE FOREGOING PURPOSES, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

LETTUCE

'Green Sun'

In Testimony Whereof, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington, D.C. this eleventh day of December, in the year two thousand and six.

Attest:

Commissioner
Plant Variety Protection Office
Agricultural Marketing Service

Secretary of Agriculture



APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE
(Instructions and information collection burden statement on reverse)

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

RAD 9/16/2001

1. NAME OF OWNER NUNZA BV <i>Nunhems BV</i>		2. TEMPORARY DESIGNATION OR EXPERIMENTAL NAME LM 8050	3. VARIETY NAME Green Sun
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP Code, and Country) Street and No.: Voort 6 City: Nunhem Zip: 6083 AC Country: the Netherlands		5. TELEPHONE (include area code) +31 (475) 599222	FOR OFFICIAL USE ONLY PVPO NUMBER 200100273 FILING DATE September 5, 2001
7. IF THE OWNER NAMED IS NOT A "PERSON", GIVE FORM OF ORGANIZATION (corporation, partnership, association, etc.) a private owned company with limited liability		6. FAX (include area code) +31 (475) 599223	
8. IF INCORPORATED, GIVE STATE OF INCORPORATION fully incorporated		9. DATE OF INCORPORATION 20 June 1957	
10. NAME AND ADDRESS OF OWNER REPRESENTATIVE(S) TO SERVE IN THIS APPLICATION. (First person listed will receive all papers) Dr. Richard C. Peet FOLEY & LARDNER Washington Harbour 3000 K Street, N.W., Suite 500 Washington, D.C. 20007-5109			
11. TELEPHONE (Include area code) (202) 672 5483		12. FAX (Include area code) (202) 672 5399	13. E-MAIL rpeet@foleylaw.com
14. CROP KIND (Common Name) Lettuce		FILING AND EXAMINATION FEES: \$ 2705 - DATE Sept. 5, 2001 CERTIFICATION FEE: \$ 768.00 DATE 10/10/2006	

18. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED (Follow instructions on reverse)		19. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE SOLD AS A CLASS OF CERTIFIED SEED? See Section 83(a) of the Plant Variety Protection Act	
a. <input checked="" type="checkbox"/> Exhibit A. Origin and Breeding History of the Variety b. <input checked="" type="checkbox"/> Exhibit B. Statement of Distinctness c. <input checked="" type="checkbox"/> Exhibit C. Objective Description of Variety d. <input type="checkbox"/> Exhibit D. Additional Description of the Variety (Optional) e. <input checked="" type="checkbox"/> Exhibit E. Statement of the Basis of the Owner's Ownership f. <input checked="" type="checkbox"/> Voucher Sample (2,500 viable untreated seeds or, for tuber propagated varieties, verification that tissue culture will be deposited and maintained in an approved public repository) g. <input checked="" type="checkbox"/> Filing and Examination Fee (\$2,705), made payable to "Treasurer of the United States" (Mail to the Plant Variety Protection Office)		<input type="checkbox"/> YES (If "yes", answer items 20 and 21 below) <input checked="" type="checkbox"/> NO (If "no," go to item 22)	
22. HAS THE VARIETY (INCLUDING ANY HARVESTED MATERIAL) OR A HYBRID PRODUCED FROM THIS VARIETY BEEN SOLD, DISPOSED OF, TRANSFERRED, OR USED IN THE U. S. OR OTHER COUNTRIES?		20. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF CLASSES?	
<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO IF YES, YOU MUST PROVIDE THE DATE OF FIRST SALE, DISPOSITION, TRANSFER, OR USE FOR EACH COUNTRY AND THE CIRCUMSTANCES. (Please use space indicated on reverse.)		IF YES, WHICH CLASSES? <input type="checkbox"/> FOUNDATION <input type="checkbox"/> REGISTERED <input type="checkbox"/> CERTIFIED	
21. DOES THE OWNER SPECIFY THAT THE CLASSES BE LIMITED AS TO NUMBER OF GENERATIONS?		23. IS THE VARIETY OR ANY COMPONENT OF THE VARIETY PROTECTED BY INTELLECTUAL PROPERTY RIGHT (PLANT BREEDER'S RIGHT OR PATENT)?	
IF YES, SPECIFY THE NUMBER 1, 2, 3, etc. <input type="checkbox"/> FOUNDATION <input type="checkbox"/> REGISTERED <input type="checkbox"/> CERTIFIED (If additional explanation is necessary, please use the space indicated on the reverse.)		<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO IF YES, GIVE COUNTRY, DATE OF FILING OR ISSUANCE AND ASSIGNED REFERENCE NUMBER. (Please use space indicated on reverse.)	

24. The owners declare that a viable sample of basic seed of the variety will be furnished with application and will be replenished upon request in accordance with such regulations as may be applicable, or for a tuber propagated variety a tissue culture will be deposited in a public repository and maintained for the duration of the certificate.

The undersigned owner(s) is(are) the owner of this sexually reproduced or tuber propagated plant variety, and believe(s) that the variety is new, distinct, uniform, and stable as required in Section 42, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act.

Owner(s) is(are) informed that false representation herein can jeopardize protection and result in penalties.

SIGNATURE OF OWNER <i>Richard C Peet for Nunza BV</i>		SIGNATURE OF OWNER	
NAME (Please print or type) <i>Richard C Peet</i>		NAME (Please print or type)	
CAPACITY OR TITLE <i>Attorney</i>	DATE <i>September 4, 2001</i>	CAPACITY OR TITLE	DATE <i>1</i>

GENERAL: To be effectively filed with the Plant Variety Protection Office (PVPO), **ALL** of the following items must be received in the PVPO: (1) Completed application form signed by the owner; (2) completed exhibits A, B, C, E; (3) for a seed reproduced variety at least 2,500 viable untreated seeds, for a hybrid variety at least 2,500 untreated seeds of each line necessary to reproduce the variety, or for tuber reproduced varieties verification that a viable (in the sense that it will reproduce an entire plant) tissue culture will be deposited and maintained in an approved public repository; (4) check drawn on a U.S. bank for \$2,705 (\$320 filing fee and \$2,385 examination fee), payable to "Treasurer of the United States" (See Section 97.6 of the Regulations and Rules of Practice.) Partial applications will be held in the PVPO for not more than 90 days, then returned to the applicant as unfilled. Mail application and other requirements to Plant Variety Protection Office, AMS, USDA, Room 500, NAL Building, 10301 Baltimore Avenue, Beltsville, MD 20705-2351. Retain one copy for your files. All items on the face of the application are self explanatory unless noted below. Corrections on the application form and exhibits must be initialed and dated. **DO NOT** use masking materials to make corrections. If a certificate is allowed, you will be requested to send a check payable to "Treasurer of the United States" in the amount of \$320 for issuance of the certificate. Certificates will be issued to owner, not licensee or agent.

Plant Variety Protection Office

Telephone: (301) 504-5518

FAX: (301) 504-5291

Homepage: <http://www.ams.usda.gov/science/PVPO/pvp.htm>

ITEM

- 18a. Give: (1) the genealogy, including public and commercial varieties, lines, or clones used, and the breeding method;
(2) the details of subsequent stages of selection and multiplication;
(3) evidence of uniformity and stability; and
(4) the type and frequency of variants during reproduction and multiplication and state how these variants may be identified
- 18b. Give a summary of the variety's distinctness. Clearly state how this application variety may be distinguished from all other varieties in the same crop. If the new variety is most similar to one variety or a group of related varieties:
(1) identify these varieties and state all differences objectively;
(2) attach statistical data for characters expressed numerically and demonstrate that these are clear differences; and
(3) submit, if helpful, seed and plant specimens or photographs (prints) of seed and plant comparisons which clearly indicate distinctness.
- 18c. Exhibit C forms are available from the PVPO Office for most crops; specify crop kind. Fill in Exhibit C (Objective Description of Variety) form as completely as possible to describe your variety.
- 18d. Optional additional characteristics and/or photographs. Describe any additional characteristics that cannot be accurately conveyed in Exhibit C. Use comparative varieties as is necessary to reveal more accurately the characteristics that are difficult to describe, such as plant habit, plant color, disease resistance, etc.
- 18e. Section 52(5) of the Act requires applicants to furnish a statement of the basis of the applicant's ownership. An Exhibit E form is available from the PVPO.
19. If "Yes" is specified (*seed of this variety be sold by variety name only, as a class of certified seed*), the applicant **MAY NOT** reverse this affirmative decision after the variety has been sold and so labeled, the decision published, or the certificate issued. However, if "No" has been specified, the applicant may change the choice. (See Regulations and Rules of Practice, Section 97.103).
21. See Section 83 of the Act for the Contents and Term of Plant Variety Protection.
22. See Sections 41, 42, and 43 of the Act and Section 97.5 of the regulations for eligibility requirements.
23. See Section 5.5 of the Act for instructions on claiming the benefit of an earlier filing date.

21. CONTINUED FROM FRONT (Please provide a statement as to the limitation and sequence of generations that may be certified.)

22. CONTINUED FROM FRONT (Please provide the date of first sale, disposition, transfer, or use for each country and the circumstances, if the variety (including any harvested material) or a hybrid produced from this variety has been sold, disposed of, transferred, or used in the U.S. or other countries.)

First sale in the European Union: Italy ; January 2000

23. CONTINUED FROM FRONT (Please give the country, date of filing or issuance, and assigned reference number, if the variety or any component of the variety is protected by intellectual property right (Plant Breeder's Right or Patent).)

COUNTRY/AUTHORITY	:EUROPEAN UNION	
IDENTIFIER	:PBR 990205	
LATIN NAME	:Lactuca sativa L.	
DENOMINATION/accepted	:1999.12.20	GREEN SUN
BREEDER'S REFR.	:lm8050	
APPL./FILING NUMB.	:990205	
APPL./FILING DATE	:1999.02.15	
DATE PUBL. APPL./FILING	:1999.04.15	
GRANT/REG. NUMB.	:5665	
DATE PUBL. GRANT/REG.	:2000.02.15	
GRANT/REG. DATE	:1999.12.20	
EXPIRATION CALC.	:2024.12.31	
APPLICANT	:NUNZA B.V.	
BREEDER	:NUNZA B.V.	

NOTES: It is the responsibility of the applicant/owner to keep the PVPO informed of any changes of address or change of ownership or assignment or owner's representative during the life of the application/certificate. There is no charge for filing a change of address. The fee for filing a change of ownership or assignment or any modification of owner's name is specified in Section 97.175 of the regulations. (See Section 101 of the Act, and Sections 97.130, 97.131, 97.175(h) of the Regulations and Rules of Practice.)

To avoid conflict with other variety names in use, the applicant must check the variety names proposed by contacting: Seed Branch, AMS, USDA, Room 213, Building 306, Beltsville Agricultural Research Center-East, Beltsville, MD 20705. Telephone: (301) 504-8089.

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this collection of information is (0581-0055). The time required to complete this information collection is estimated to average 1.4 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, gender, religion, age, disability, political beliefs, sexual orientation, and marital or family status. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact the USDA's TARGET Center at 202-720-2600 (voice and TDD). To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 14th and Independence Avenue, SW, Washington, DC 20250-9410 or call (202) 720-5964 (voice and TDD). USDA is an equal opportunity provider and employer.

S&T-470 (9-00) designed by the Plant Variety Protection Office with WordPerfect 6.0a. Replaces STD-470 (6-98) which is obsolete.

Exhibit A

- 1) The genealogy, including public and commercial varieties, lines, or clones used, and the breeding method:

'Green Sun' originated from a cross made by the Applicant, NUNHEMS, B.V., in 1988 in s'Gravensande, The Netherlands. The female or seed parent is *Lactuca sativa* L. variety designated by Breeder's Reference Number 02-120375 (unpatented) and is characterized by green leaves. The male or pollen parent is *Lactuca sativa* L. variety designated by Breeder's Reference Number 71-881316 (unpatented) and is characterized by blonde leaves and *Bremia* downy mildew resistance Dm 18.

The most similar *Lactuca sativa* L. variety to 'Green Sun' is designated 'Caliente' (disclosed in pending PVP Appl. No. 200100274), and has been commercially available/disclosed since January 2000.

The objective of the cross was to develop a new butterhead variety with dark green leaf color, slow bolting, and *Bremia* downy mildew resistance to pathotypes NL 1-16 and BL 17 and 21. The combination of resistance to *Bremia* downy mildew pathotypes NL 1-16 and BL 17 & 21 is defined as Gene DM 18.

A single plant selection with the desired characteristics in combination with resistance to *Bremia* downy mildew was conducted from F2 through F8 generations. Stability for *Bremia* downy mildew resistance pathotypes NL 1-16 and BL 17 & 21 was achieved in the F5 generation.

- 2) The details of subsequent stages of selection and multiplication:

In 1996, the 'Green Sun' variety was uniform and genetically stable for type in the F8. There were commercial seed productions in greenhouses in 1996, 1997, 1998, and 1999.

- 3) Evidence of uniformity and stability:

The 'Green Sun' variety has exhibited genetic stability and uniformity for horticultural type from the F7 generation and through 4 generations of seed increase. Stability for *Bremia* downy mildew resistance has been maintained since the F5 generation.

- 4) The type and frequency of variants during reproduction and state how these variants may be identified:

No variants have been found.

I. Exhibit A – Origin and Breeding History

Per the Examiner's request, Applicant provides the following additional information regarding the origin and breeding information for the Lettuce Variety 'Green Sun':

The female or seed parent designated '02-120375' and the male or pollen parent designated '71-881316' are both unpatented varieties from the private proprietary collection of the Applicant. These parental varieties were not purchased, and the Applicant is unaware of any publicly known varieties being derived from these parental varieties.

WASH_1646405.1

Exhibit B

Statement of Distinctness

The following traits have been repeatedly observed and are determined to be the unique characteristics of the new *Lactuca sativa* L. variety 'Green Sun'. These characteristics in combination distinguish 'Green Sun' as a new and distinct butterhead lettuce variety: 1) dark green leaf color, 2) slow bolting, 3) white seed color, and 4) resistance to *Bremia* downy mildew pathotypes NL 1-16 and BL 17 & 21. The combination of resistance to *Bremia* downy mildew pathotypes NL 1-16 and BL 17 & 21 is defined as Gene DM 18.

Of the many commercial *Lactuca sativa* L. varieties known, the most similar in comparison to the new butterhead lettuce variety 'Green Sun' is the butterhead lettuce variety 'Caliente' (as disclosed in pending USDA PVP Application Number 200100274). In side-by-side comparisons conducted in s'Gravenzande, The Netherlands, 'Green Sun' differed from 'Caliente' in the characteristics described in Table 1:

Table 1

Characteristic	New Variety 'Green Sun'	Comparison Variety 'Caliente' (Disclosed in pending PVP Application No. 200100274)
Head Firmness	Firm	Moderate
Cotyledon Fourth Leaf Traits	Shape: 4, Rounded Undulation: Flat	Shape: 3, Oval Undulation: Medium
Expressed Gene(s) for <i>Bremia</i> downy mildew resistance	DM 18	DM 18
Glossiness of upper site	Weak to medium	Medium
Blistering	Weak to medium	Medium

RAID
11/7/06UPOV variety description
translation from Dutch

1. Reference number of reporting authority : SLA 1081
 2. Reference number of requesting authority :
 3. Breeder's reference :
 4. Applicant :
-
5. Botanical name of taxon : Lactuca sativa L.
 6. Common name of taxon : Lettuce
 7. Variety denomination : Green Sun
 8. Document number and date UPOV guidelines : TG/13/7 d.d. 16-10-1993
 9. Document number and/or date of national test guidelines :
 10. Testing authority : Raad v/h Kwekersrecht, Wageningen, NL
 11. Testing station(s) and place(s) : CPRO, Wageningen
 12. Period of testing : 1998
 13. Date and place of issue of document : 21-10-1999, Wageningen
-
14. Group: (if characteristics of number 15 are used for grouping, they are marked with a "G" in that number).

UPOV No.	Characteristics	States of expression	Note	Remarks
	Growth type (at harvest maturity)	butterhead lettuce	1	
-	Suitable for:	outdoors	2	
1.	Seed: color	white	1	
2.	Seedling: anthocyanin coloration	absent	1	
19.	Leaf: anthocyanin coloration	absent	1	
37.	Time of beginning of bolting under long day conditions	late to very late	8	



RAP
11/7/06

Reference number of reporting authority:

SLA 1081

15. Characteristics included in the UPOV guidelines or national test guidelines

UPOV No.	Characteristics	States of expression	Note	Remarks
1.G	Seed: color	white	1	
2.G	Seedling: anthocyanin coloration	absent	1	
3.	Seedling: size of cotyledon	small to medium	4	
4.	Seedling: shape of cotyledon	elliptic to broad elliptic	6	
5.	Leaf: attitude (at 10-12 leaf stage)	semi-erect to prostrate	6	
6.	Leaf blade: division (time as for 5)	entire	1	
7.	Plant: diameter	medium to large	6	to medium (5)
8.	Plant: head formation	closed head (overlapping)	3	
9.	VARIETIES WITH CLOSED HEAD: Head: degree of overlapping of leaves	medium to strong	6	
10.	Head: density	medium to dense	6	to dense (7)
11.	Head: size	medium	5	
12.	Head: closing of base	strong	7	
13.	Head: shape in longitudinal section	circular	3	
14.	Leaf: thickness	medium to thick	6	
15.	Leaf: attitude of outer leaves (at harvest maturity)	semi-erect	5	
16.	Leaf: shape	transverse broad elliptic	5	
17.	Leaf: color of outer leaves	green	2	



RAD
9/5/06

200100273

'Green Sun'

Reference number of reporting authority:

SIA 1081

15. Characteristics included in the UPOV guidelines or national test guidelines

UPOV No.	Characteristics	States of expression	Note	Remarks
18.	Leaf: intensity of color of outer leaves	dark	7	
19.G	Leaf: anthocyanin coloration	absent	1	
20.	Leaf: intensity of anthocyanin coloration	-	-	
21.	Leaf: distribution of anthocyanin	-	-	
22.	Leaf: kind of anthocyanin distribution	-	-	
23.	Leaf: glossiness of upper side	weak to medium	4	to medium (5)
24.	Leaf: surface profile of outer leaves	concave to flat	4	
25.	Leaf: blistering	weak to medium	4	
26.	Leaf: size of blisters	medium to large	6	
27.	Leaf blade: degree of undulation of margin	absent or very weak	1	
28.	Leaf blade: presence of incisions on margin on apical part	absent	1	
29.	Leaf blade: depth of incisions on margin on apical part	-	-	
30	Leaf blade: degree of ...			

UPOV variety description
translation from Dutch

1. Reference number of reporting authority : SLA 1082
 2. Reference number of requesting authority :
 3. Breeder's reference :
 4. Applicant :
-
5. Botanical name of taxon : Lactuca sativa L.
 6. Common name of taxon : Lettuce
 7. Variety denomination : Caliente
 8. Document number and date UPOV guidelines : TG/13/7 d.d. 16-10-1993
 9. Document number and/or date of national test guidelines :
 10. Testing authority : Raad v/h Kwekersrecht, Wageningen, NL
 11. Testing station(s) and place(s) : CPRO, Wageningen
 12. Period of testing : 1998
 13. Date and place of issue of document : 21-10-1999, Wageningen
-
14. Group: (if characteristics of number 15 are used for grouping, they are marked with a "G" in that number).

UPOV No.	Characteristics	States of expression	Note	Remarks
	Growth type (at harvest maturity)	butterhead lettuce	1	
-	Suitable for:	outdoors	2	
1.	Seed: color	white	1	
2.	Seedling: anthocyanin coloration	absent	1	
19.	Leaf: anthocyanin coloration	absent	1	
37.	Time of beginning of bolting under long day conditions	late to very late	8	



'Caliente'

RAD
11/7/04

Reference number of reporting authority:

SLA 1082

15. Characteristics included in the UPOV guidelines or national test guidelines

UPOV No.	Characteristics	States of expression	Note	Remarks
1.G	Seed: color	white	1	
2.G	Seedling: anthocyanin coloration	absent	1	
3.	Seedling: size of cotyledon	medium	5	
4.	Seedling: shape of cotyledon	elliptic to broad elliptic	6	
5.	Leaf: attitude (at 10-12 leaf stage)	semi-erect to prostrate	6	
6.	Leaf blade: division (time as for 5)	entire	1	
7.	Plant: diameter	medium	5	to large (6)
8.	Plant: head formation	closed head (overlapping)	3	
9.	VARIETIES WITH CLOSED HEAD: Head: degree of overlapping of leaves	medium to strong	6	
10.	Head: density	medium to dense	6	
11.	Head: size	medium	5	
12.	Head: closing of base	strong	7	
13.	Head: shape in longitudinal section	circular	3	
14.	Leaf: thickness	medium to thick	6	
15.	Leaf: attitude of outer leaves (at harvest maturity)	semi-erect to nearly horizontal	6	
16.	Leaf: shape	transverse broad elliptic	5	
17.	Leaf: color of outer leaves	green	2	



11/11

RAD
9/5/2006

'Caliente'

Reference number of reporting authority:

SLA 1082

15. Characteristics included in the UPOV guidelines or national test guidelines

UPOV No.	Characteristics	States of expression	Note	Remarks
18.	Leaf: intensity of color of outer leaves	dark	7	
19.G	Leaf: anthocyanin coloration	absent	1	
20.	Leaf: intensity of anthocyanin coloration	-	-	
21.	Leaf: distribution of anthocyanin	-	-	
22.	Leaf: kind of anthocyanin distribution	-	-	
23.	Leaf: glossiness of upper side	medium	5	
24.	Leaf: surface profile of outer leaves	flat	5	
25.	Leaf: blistering	medium	5	
26.	Leaf: size of blisters	medium to large	6	
27.	Leaf blade: degree of undulation of margin	absent or very weak	1	
28.	Leaf blade: presence of incisions on margin on apical part	absent	1	
29.	Leaf blade: depth of incisions on margin on apical part	-	-	
30.	Leaf blade: degree of incisions on margin apical part	-	-	
31.	Leaf blade: venation	not flabellate	1	
32.	Plant: height (flowering plant)	-	-	
33.	Stem: fasciation (as for 32)	present	9	
34.	Stem: intensity of fasciation (as for 32)	very weak	1	



U. S. Department of Agriculture
Agricultural Marketing Service
Science and Technology Program

Edible G

OBJECTIVE DESCRIPTION OF VARIETY
LETTUCE *Lactuca sativa*

NAME OF APPLICANT (S)	NUNZA-BV Nunhems BV	FOR OFFICIAL USE ONLY
ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP Code)	Street and No: Voort 6 City: Nunhem - Zip: 6083 AC Country: The Netherlands	PVFO NUMBER 200100273 VARIETY NAME Green Sun EXPERIMENTAL DESIGNATION

Place numbers in the boxes for the characters which best describe this variety. Measured data should be the mean of an appropriate number (at least 10) of spaced plants. Royal Horticultural Society or any recognized color standard may be used to determine plant colors.

The location of the test area is: Noordlandseweg 54, 2692 KM 's-Gravenzande

Color System Used:

1. PLANT TYPE: (See list of suggested check varieties page 4.)

01-Cutting/Leaf	05-Great Lakes Group	09-Stem
02-Butterhead	06-Vanguard Group	10-Latin
03-Bibb	07-Imperial Group	11-OTHER
04-Cos or Romaine	08-Eastern (Ithaca) Group	

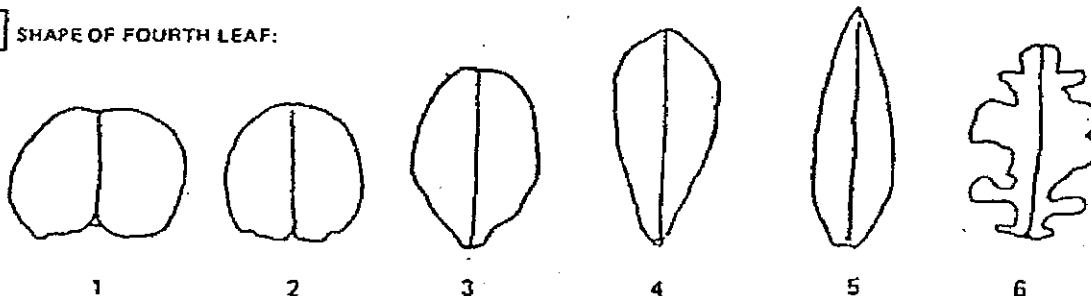
2. SEED:

COLOR	LIGHT DORMANCY	HEAT DORMANCY
1-White (Silver Gray)	1-Light Required	1-Susceptible
2-Black (Gray Brown)	2-Light Not Required	2-Not Susceptible
3-Brown (Amber)		

3. COTYLEDON TO FOURTH LEAF STAGE: NOTE: Provide a color photograph or photocopy of the fourth leaf from 20 day old seedling grown under optimal conditions.

2 SHAPE OF COTYLEDONS: 1-Broad 2-Intermediate 3-Spatulate

2 SHAPE OF FOURTH LEAF:



2 0 LENGTH/WIDTH INDEX OF FOURTH LEAF: LW x 10

1	APICAL MARGIN:	1-Entire	4-Moderately Dentate	7-Lobed
1	BASAL MARGIN:	2-Crenate/Gnawed	5-Coarsely Dentate	8-OTHER (specify)
		3-Finely Dentate	6-Incised	
1	UNDULATION:	1-Flat	2-Slight	3-Medium
				4-Marked
4	GREEN COLOR:	1-Yellow Green	3-Medium Green	5-Blue Green
		2-Light Green	4-Dark Green	6-Silver Green
	ANTHOCYANIN:			5-OTHER (specify)
1	DISTRIBUTION:	1-Absent	3-Spotted	
		2-Margin Only	4-Throughout	
	CONCENTRATION:	1-Light	2-Moderate	3-Intense
1	ROLLING:	1-Absent	2-Present	
1	CUPPING:	1-Uncupped	2-Slight	3-Markedly
1	REFLEXING:	1-None	2-Apical Margin	3-Lateral Margins

4. MATURE LEAVES (observe harvest-mature outer leaves):

NOTE: Provide color photo of harvest-mature leaves which accurately shows color and margin characteristics.

MARGIN:

1	INCISION DEPTH: (deepest penetration of the margin)	1-Absent/Shallow (Dark Green Boston)	2-Moderate (Vanguard)	3-Deep (Great Lakes 659)
1	INDENTATION: (finest divisions of the margin)	1-Entire (Dark Green Boston)	3-Deeply Dentate (Great Lakes 659)	5-OTHER (specify)
		2-Shallowly Dentate (Great Lakes 65)	4-Crenate (Vanguard)	
1	UNDULATION OF THE APICAL MARGIN:	1-Absent/Slight (Dark Green Boston)	2-Moderate (Vanguard)	3-Strong (Great Lakes 65)
4	GREEN COLOR:	1-Very Light Green (Bibb)	3-Medium Green (Great Lakes)	5-Very Dark Green
		2-Light Green (Minetto)	4-Dark Green (Vanguard)	6-OTHER
ANTHOCYANIN (grown at or below 10 C):				
1	DISTRIBUTION:	1-Absent	3-Spotted (Calif. Cream Butter)	5-OTHER (specify)
		2-Margin Only (Big Boston)	4-Throughout (Prize Head)	
	CONCENTRATION:	1-Light (Iceberg)	2-Moderate (Prize Head)	3-Intense (Ruby)
2	SIZE:	1-Small	2-Medium	3-Large
2	GLOSSINESS:	1-Dull (Vanguard)	2-Moderate (Salinas)	3-Glossy (Great Lakes)
2	BLISTERING:	1-Absent/Slight (Salinas)	2-Moderate (Vanguard)	3-Strong (Prize Head)
3	LEAF THICKNESS:	1-Thin	2-Intermediate	3-Thick
1	TRICHOMES:	1-Absent (smooth)	2-Present (spiny)	

5. PLANT (at market stage. Choose a comparison variety appropriate for this type.):

3	3	SPREAD OF FRAME LEAVES:	3	0	cm This Variety	3	0	cm LM 8052	(specify comparison variety)			
3	0	HEAD DIAMETER (market trimmed with single cap leaf):	2	8	cm This Variety	2	8	cm LM 8052	(specify comparison variety)			
1		HEAD SHAPE:	1-Flattened		3-Spherical							
			2-Slightly Flattened		4-Elongate							
					5-Non-Heading							
					6-OTHER							
2		HEAD SIZE CLASS:	1-Small		2-Medium							
					3-Large							
		HEAD COUNT PER CARTON										
4	5	0	HEAD WEIGHT:	4	5	0	g This Variety	4	5	0	g LM 8052	(specify comparison variety)
3			HEAD FIRMNESS:	1-Loose		3-Firm						
				2-Moderate		4-Very Firm						

6. BUTT (bottom of market-trimmed head):

2	SHAPE:	1-Slightly Concave	2-Flat	3-Rounded
1	MIDRIB:	1-Flattened (Salinas)	2-Moderately Raised	3-Prominently Raised (Great Lakes 659)

7. CORE (stem of market-trimmed head):

2	0	mm Diameter at base of head							
2	1	Ratio of head diameter/core diameter							
2	0	Core height from base of head to apex:	2	0	mm This Variety	2	0	mm LM 8052	(specify comparison variety)

8. BOLTING (Give First Water Date _____): NOTE: First Water Date is the date seed first receives adequate moisture to germinate. This can and often does equal the planting date.

6	5	Number of days from First Water Date to seed stalk emergence (summer conditions):	6	0	This Variety	6	0	LM 8052	(specify comparison variety)			
2		BOLTING CLASS:	1-Very Slow		3-Medium							
			2-Slow		4-Rapid							
1	6	0	Height of mature seed stalk:	1	5	0	cm This Variety	1	5	0	cm LM 8052	(specify comparison variety)

Spread of Bolter Plant (at widest point):
 cm This Variety cm LM 8052 (specify comparison variety)

<input type="text" value="2"/>	BOLTER LEAVES:	1-Straight	2-Curved
<input type="text" value="1"/>	MARGIN:	1-Entire	2-Dentate
<input type="text" value="3"/>	COLOR:	1-Light Green	2-Medium Green 3-Dark Green
BOLTER HABIT:			
<input type="text" value="1"/>	TERMINAL INFLORESCENCE:	1-Absent	2-Present
<input type="text" value="2"/>	LATERAL SHOOTS: (above head)	1-Absent	2-Present
<input type="text" value="1"/>	BASAL SIDE SHOOTS:	1-Absent	2-Present

9. MATURITY (earliness of harvest-mature head formation):

NOTE: Complete this section for at least one season.

SEASON	Applc. 1/ # of days	Check 1/ # of days	CHECK VARIETY 2/
Spring	<input type="text" value="6"/> <input type="text" value="0"/>	<input type="text" value="6"/> <input type="text" value="5"/>	LM 8052
Summer	<input type="text" value="3"/> <input type="text" value="2"/>	<input type="text" value="3"/> <input type="text" value="5"/>	LM 8052
Fall	<input type="text" value="4"/> <input type="text" value="5"/>	<input type="text" value="5"/> <input type="text" value="0"/>	LM 8052
Winter	<input type="text" value=""/> <input type="text" value=""/>	<input type="text" value=""/> <input type="text" value=""/>	

Give planting date(s), and location(s):

Spring April/May; Noordlandseweg 54, 2691 KM 's-Gravenzande, the Netherlands

Summer July/August; Noordlandseweg 54, 2691 KM 's-Gravenzande, the Netherlands

Fall September/October; Noordlandseweg 54, 2691 KM 's-Gravenzande, the Netherlands

Winter No plantings

1/ First water date to harvest.

2/ Fill in check variety name on the appropriate line.

10. ADAPTATION:

PRIMARY REGIONS OF ADAPTION (tested and proven adapted):

(0=Not tested

1=Not Adapted

2=Adapted)

<input type="checkbox"/>	Southwest (Calif., Ariz. desert)	<input type="checkbox"/>	West Coast	<input type="checkbox"/>	Northeast
<input type="checkbox"/>	Northcentral	<input type="checkbox"/>	Southeast	<input type="checkbox"/>	OTHER _____
SEASON:					
<input type="checkbox"/>	Spring (area _____)	<input type="checkbox"/>	Fall (area _____)		
<input type="checkbox"/>	Summer (area _____)	<input type="checkbox"/>	Winter (area _____)		
<input type="text" value="1"/>	GREENHOUSE:	0=Not tested	1=Not Adapted	2=Adapted	
<input type="text" value="3"/>	SOIL TYPE:	1-Mineral	2-Organic	3-Both	

11. DISEASES AND STRESS REACTIONS (0=Not tested; 1=Susceptible; 2=Intermediate; 3=Resistant; 4=Highly resistant; 5=Tolerant):

VIRUS

- ☒ 1 Big Vein
☒ 5 Lettuce Mosaic
☒ 1 Cucumber Mosaic
☒ 0 Broad Bean Wilt
☒ 0 Turnip Mosaic
☒ 1 Seer Western Yellows
☒ 0 Lett. Infectious Yellows
☐ Other Virus _____

FUNGAL/BACTERIAL

- ☒ 1 Corky Root Rot (Pythium Root Rot)
☒ 3 Downy Mildew (Races NL 1-16; BL 17,21)
☒ 0 Powdery Mildew
☒ 2 Sclerotinia Rot
☒ 2 Bacterial Soft Rot (Pseudomonas spp. & others)
☒ 2 Botrytis (Gray Mold)
☐ OTHER _____

INSECTS

- ☒ 0 Cabbage Loopers
☒ 1 Root Aphids
☒ 0 Green Peach Aphid
☐ Other Insect _____

PHYSIOLOGICAL/STRESS

- ☒ 4 Tipburn
☒ 4 Heat
☒ 2 Drought
☒ 2 Cold
☒ 2 Salt
☒ 2 Brown Rib (Rib Discoloration, Rib Blight)
☐ OTHER _____

POST HARVEST

- ☒ 0 Pink Rib
☒ 0 Russet Spotting
☒ 0 Rusty Brown Discoloration
☒ 4 Internal Rib Necrosis (Blackheart, Gray Rib, Gray Streak)
☒ 4 Brown Stain

12. BIOCHEMICAL OR ELECTROPHORETIC MARKERS:

13. COMMENTS:

The data and information presented are based on testing and evaluation of the variety in the Netherlands. The climate conditions in the Netherlands are a moderate sea climate. Especially the references made in questions 5, 7, 8 and 9 are very depending on cultivation conditions of the candidate variety and cannot used as reference for cultivation in other climate areas.

SUGGESTED CHECK VARIETIES

TYPE

- 1) CUTTING/LEAF
 2) BUTTERHEAD
 3) BIBB
 4) COS, OR ROMAINE
 5) GREAT LAKES GROUP
 6) VANGUARD GROUP
 7) IMPERIAL GROUP
 8) EASTERN GROUP
 9) STEM
 10) LATIN

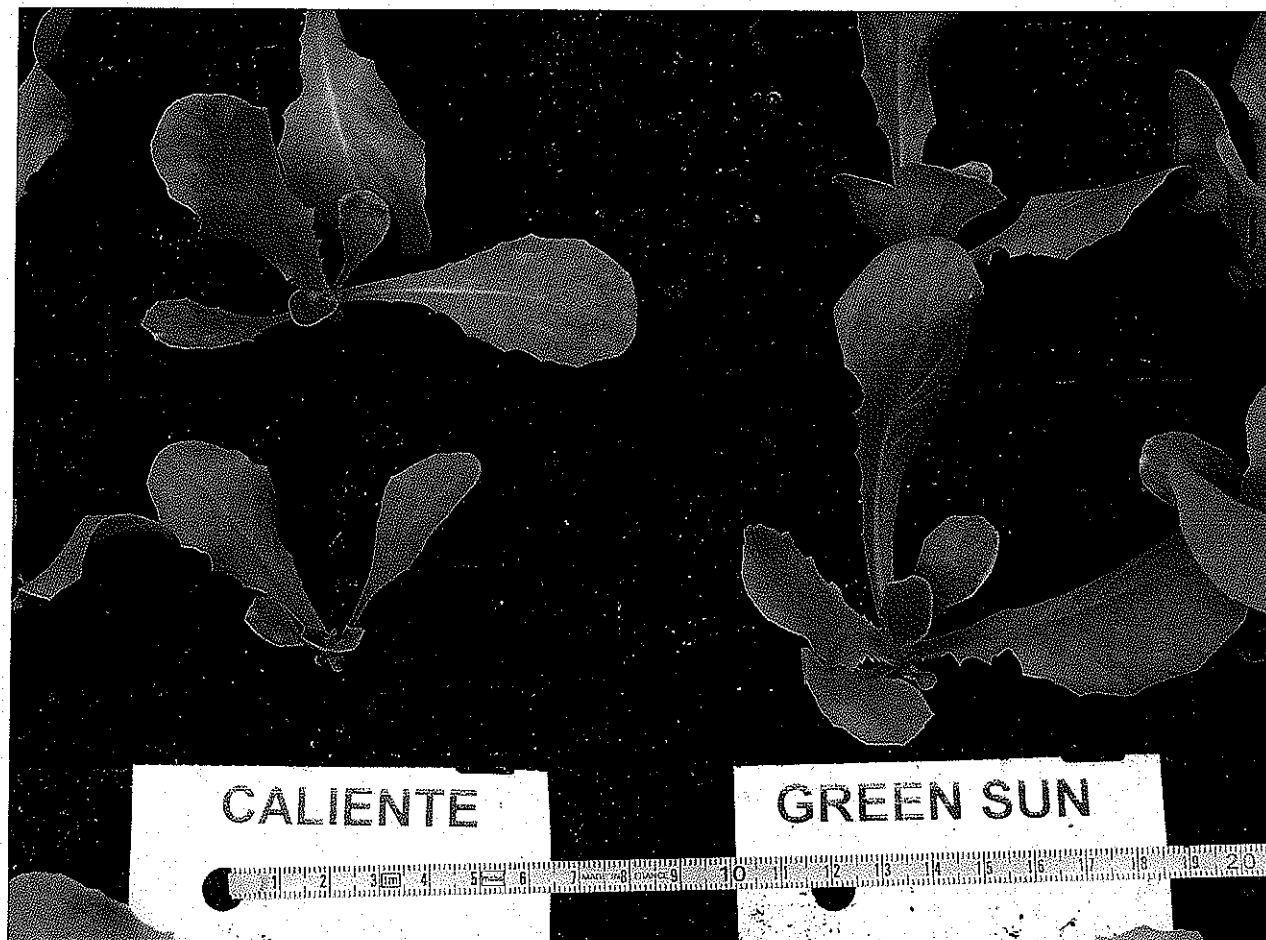
CHECK VARIETY

- SALAD BOWL
 DARK GREEN BOSTON
 BIBB
 FARRIS ISLAND
 GREAT LAKES 659-700
 VANGUARD
 VIVA
 ITHACA
 CELTUCE
 MATCHLESS

PVP Application No.: 200100274
Lettuce Variety 'Caliente'
Attorney Docket No. 082671-0130

And

PVP Application No.: 200100273
Lettuce Variety 'Green Sun'
Attorney Docket No. 082671-0132



200100273

PVP Application No.: 200100274

Lettuce Variety 'Caliente'

Attorney Docket No. 082671-0130

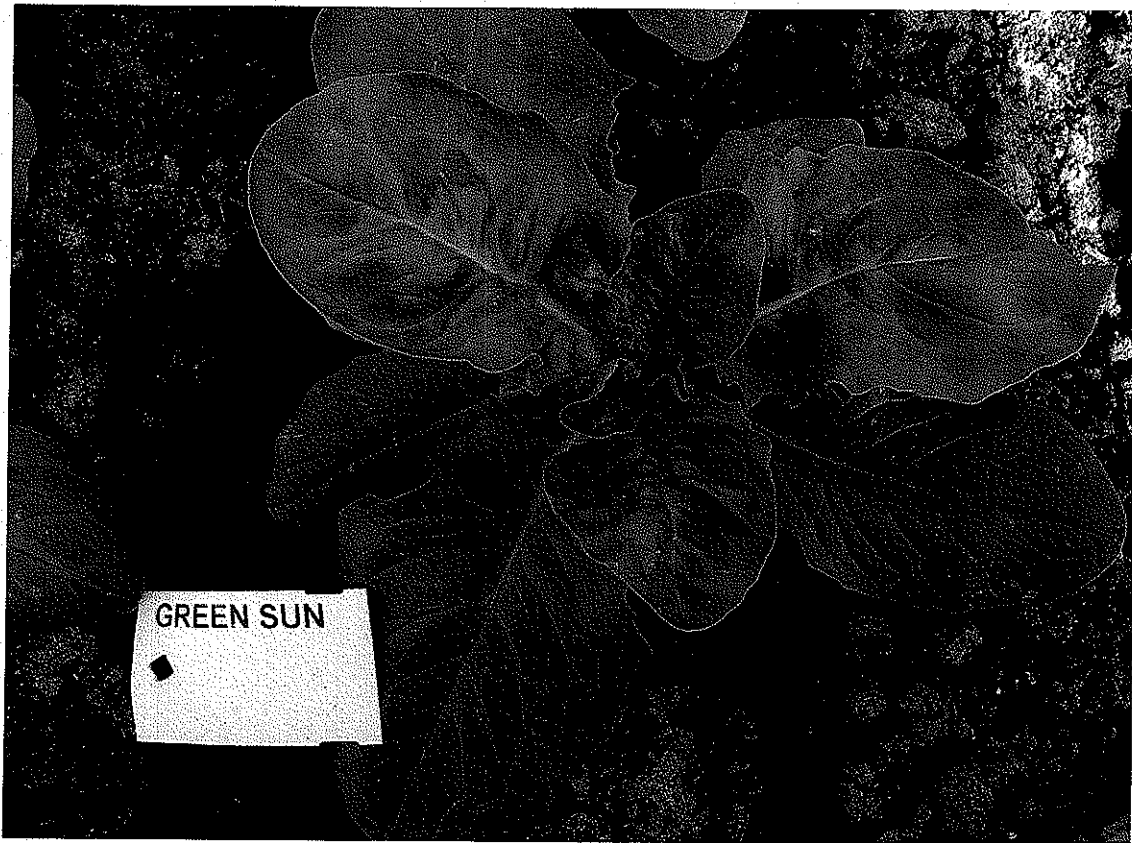
And

PVP Application No.: 200100273

Lettuce Variety 'Green Sun'

Attorney Docket No. 082671-0132







In re Application No.: New Application
Variety Name: LM 8050
Examiner: UNKNOWN
For: Lettuce Application

POWER OF ATTORNEY/DESIGNATION OF REPRESENTATIVE

Plant Variety Protection Office, AMD, USDA
NAL Building, Room 500
10301 Baltimore Avenue
Beltsville, MD 20705-2351

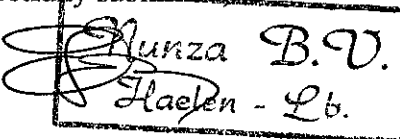
Sir:

The undersigned applicant in the above-identified application hereby appoints as its attorneys with full power of substitution and revocation, to prosecute this application and transact all business in the Plant Variety Protection Office in connection therewith, members of the firm of Foley & Lardner. It is requested that all correspondence be sent to:

Richard C. Peet
FOLEY & LARDNER
3000 K Street, N.W., Suite 500
Washington, D.C. 20007-5109

Please address telephone communications to Richard C. Peet at (202) 672-5483.

Respectfully submitted,

p/o 

Date: August 9, 2001

Lex Welles
Deputy Director New Products Dev.
NUNZA BV
Voort 6
Nunhem 6083 AC
The Netherlands

21

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE**EXHIBIT E**
STATEMENT OF THE BASIS OF OWNERSHIP

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). The information is held confidential until the certificate is issued (7 U.S.C. 2426).

1. NAME OF APPLICANT(S)

NUNZA BV

Nunhems BV

2. TEMPORARY DESIGNATION
OR EXPERIMENTAL NUMBER

LM 8050

3. VARIETY NAME

Green Sun

4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP, and Country)

Street and No.: Voort 6

City: Nunhem

ZIP: 6083 AC

Country: The Netherlands

5. TELEPHONE (Include area code)

+31 (475) 599222

6. FAX (Include area code)

+31 (475) 599223

7. PVPO NUMBER

200100273

8. Does the applicant own all rights to the variety? Mark an "X" in the appropriate block. If no, please explain.



9. Is the applicant (individual or company) a U.S. national or a U.S. based company? If no, give name of country.



The Netherlands

10. Is the applicant the original owner?

☐ YES☒ NOIf no, please answer one of the following:

a. If the original rights to variety were owned by individual(s), is (are) the original owner(s) a U.S. National(s)?

☐ YES☐ NO

If no, give name of country

b. If the original rights to variety were owned by a company(ies), is (are) the original owner(s) a U.S. based company?

☐ YES☒ NO

If no, give name of country

The Netherlands

11. Additional explanation on ownership (If needed, use the reverse for extra space):

none

PLEASE NOTE:

Plant variety protection can only be afforded to the owners (not licensees) who meet the following criteria:

1. If the rights to the variety are owned by the original breeder, that person must be a U.S. national, national of a UPOV member country, or national of a country which affords similar protection to nationals of the U.S. for the same genus and species.
2. If the rights to the variety are owned by the company which employed the original breeder(s), the company must be U.S. based, owned by nationals of a UPOV member country, or owned by nationals of a country which affords similar protection to nationals of the U.S. for the same genus and species.
3. If the applicant is an owner who is not the original owner, both the original owner and the applicant must meet one of the above criteria.

The original breeder/owner may be the individual or company who directed the final breeding. See Section 41(a)(2) of the Plant Variety Protection Act for definitions.

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0581-0055. The time required to complete this information collection is estimated to average 6 minutes per response, including the time for reviewing the instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

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